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Reply to Office Action of September 2, 2008
Appl. No. 09/705,927

## *Amendments to the Claims*

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (Currently Amended)    A method of structuring interactive content for <u>hardware</u> ~~mobile~~ devices, comprising the steps of:

determining layout and rendering parameters based on ~~mobile~~ device information;

parsing requested content including a plurality of pages into a document having a plurality of discrete objects, each discrete object having a format based on at least said layout and rendering parameters;

generating a document table ~~based on an object-by-object basis~~ for said document~~, wherein the document table includes a first pointer and a second pointer associated with a discrete object, wherein the first pointer is used to access a method associated with the discrete object, and wherein the second pointer points to the discrete object~~;

inputting said document into a content stream, wherein said content stream includes the plurality of objects;

inputting said document table into said content stream ~~according to said object-by-object basis; and~~

<u>modifying an object of said content stream, comprising the step of:</u>

<u>accessing an object pointer in said document table within said content stream, wherein said object pointer comprises a vtable pointer for accessing instance methods and an attribute pointer for accessing said object within said content stream; and</u>

transmitting said content stream to a <u>hardware</u> ~~mobile~~ device.


2. (Currently Amended)    The method of claim 1, wherein <u>said generating step comprises generating the document table on an object by object basis for said document and wherein</u> said object-by-object basis corresponds to distinguishable pieces of said request content.

3. (Previously Presented)     The method of claim 1, whereby said document table provides points of reference to the objects of said document.

4. (Currently Amended)     The method of claim 1, further comprising the steps of:

compressing said document ~~according to said object-by-object basis~~; and

encrypting said document ~~according to said object-by-object basis~~.

5-6. (Canceled)

7. (Currently Amended)     The method of claim 1, further comprising the step of:

storing said content stream on a <u>hardware</u> ~~mobile~~ device.

8. (Canceled)

9. (Currently Amended)     The method of claim [[8]] <u>1</u>, wherein <u>said</u> modifying step <u>further</u> comprises the steps of:

(a) ~~accessing an object pointer in said document table within said content stream, wherein said object pointer comprises the first pointer and the second pointer, wherein the first pointer is a vtable pointer for accessing instance methods and the first pointer is an attribute pointer for accessing said object within said content stream;~~

(b)     copying said object to a new memory space for modification;

(e)     altering said object with said instance methods; and

(d)     updating the ~~second~~ <u>attribute</u> pointer to point to the memory space of said object that has been altered.

10. (Currently Amended)    A computer system of structuring interactive content for <u>hardware</u> ~~mobile~~ devices, comprising:

a module to determine layout and rendering parameters based on ~~mobile~~ device information;

a module to parse requested content including a plurality of pages into a document having a plurality of discrete objects, each discrete object having a format based on at least said layout and rendering parameters;

a module to generate a document table ~~based on an object-by-object basis~~ for said document~~, wherein the document table includes a first pointer and a second pointer associated with a discrete object, wherein the first pointer is used to access a method associated with the discrete object, and wherein the second pointer points to the discrete object~~;

a module to input said document into a content stream, wherein said content stream includes the plurality of objects;

a module to input said document table into said content stream ~~according to said object-by-object basis; and~~

<u>a module to modify an object of said content stream, comprising the step of:</u>

<u>accessing an object pointer in said document table within said content stream, wherein said object pointer comprises a vtable pointer for accessing instance methods and an attribute pointer for accessing said object within said content stream; and</u>

a module to transmit said content stream to a <u>hardware</u> ~~mobile~~ device.


11. (Currently Amended)    The system of claim 10, wherein <u>said generating module generates the document table on an object by object basis for said document and wherein</u> said object-by-object basis corresponds to distinguishable pieces of said request content.


12. (Previously Presented)    The system of claim 10, whereby said document table provides points of reference to the objects of said document.

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13. (Currently Amended)     The system of claim 10, further comprising:

a module to compress said document ~~according to said object-by-object basis~~; and

a module to encrypt said document ~~according to said object-by-object basis~~.

14-15. (Canceled)

16. (Currently Amended)     The system of claim 10, further comprising:

~~said~~ a module to store content stream on a <u>hardware</u> ~~mobile~~ device.

17. (Canceled)

18. (Currently Amended)     The system of claim [[17]] <u>10</u>, wherein said modifying module <u>further</u> comprises:

~~a module to access an object pointer in said document table within said content stream, wherein said object pointer comprises the first pointer and the second pointer, wherein the first pointer is a vtable pointer for accessing instance methods and an attribute pointer for accessing said object within said content stream;~~

a module to copy said object to a new memory space for modification;

a module to alter said object with said instance methods; and

a module to update the ~~second~~ <u>attribute</u> pointer to point to the memory space of said object that has been altered.

19. (Currently Amended)     A <u>tangible</u> computer program product comprising a computer usable medium having computer readable program code means embodied in said medium for causing a computer to structure interactive content for <u>hardware</u> ~~mobile~~ devices, said computer readable program code means comprising:

a first computer readable program code means for causing a computer to determine layout and rendering parameters based on ~~mobile~~ device information;

a second computer readable program code means for causing a computer to parse requested content including a plurality of pages into a document having a plurality of discrete objects, each discrete object having a format based on at least said layout and rendering parameters;

a third computer readable program code means for causing a computer to generate a document table ~~based on an object-by-object basis for said document, wherein the document table includes a first pointer and a second pointer associated with a discrete object, wherein the first pointer is used to access a method associated with the discrete object, and wherein the second pointer points to the discrete object~~;

a fourth computer readable program code means for causing a computer to input said document into a content stream, wherein said content stream includes the plurality of objects, wherein objects of the plurality of objects are ordered according to a defined order within said content stream;

a fifth computer readable program code means for causing a computer to input said document table into said content stream ~~according to said object-by-object basis; and~~

a sixth computer readable program code means for causing a computer to modify an object of said content stream, comprising:

a seventh computer readable program code means for causing a computer to access an object pointer in said document table within said content stream, wherein said object pointer comprises a vtable pointer for accessing instance methods and an attribute pointer for accessing said object within said content stream; and

a ~~sixth~~ eighth computer readable program code means for causing a computer to transmit said content stream to a mobile device.


20. (Currently Amended)    The computer program product of claim 19, wherein said third computer readable program code means comprises a ninth computer readable program means for generating the document table on an object by object basis for said document and wherein said object-by-object basis corresponds to distinguishable pieces of said request content.

21. (Previously Presented)    The computer program product of claim 19, whereby said document table provides points of reference to the objects of said document.

22. (Currently Amended)    The computer program product of claim 19, said computer program product further comprising:

an eighth a ninth computer readable program code means for causing a computer to compressing said document according to said object-by-object basis; and

a ninth tenth computer readable program code means for causing a computer to encrypting said document according to said object-by-object basis.

23-24. (Canceled)

25. (Currently Amended)    The computer program product of claim 19, said computer program product further comprising:

an eighth a ninth computer readable program code means for causing a computer to store said content stream on a hardware mobile device.

26. (Canceled)

27. (Currently Amended)    The computer program product of claim [[26]] 19, wherein said eighth seventh computer readable program code means comprises:

a ninth computer readable program code means for causing a computer to access an object pointer in said document table within said content stream, wherein said object pointer comprises the first pointer and the second pointer, wherein the first pointer is a vtable pointer for accessing instance methods and the second pointer is an attribute pointer for access said object within said content stream;

a tenth ninth computer readable program code means for causing a computer to copy said object to a new memory space for modification;

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an ~~eleventh~~ <u>tenth</u> computer readable program code means for causing a computer to alter said object with said instance methods; and

a ~~twelfth~~ <u>eleventh</u> computer readable program code means for causing a computer to update the second pointer to point to the memory space of said object that has been altered.

28. (Currently Amended) A method of structuring interactive content for mobile devices, comprising:

determining layout and rendering parameters based on mobile device information;

parsing requested content into a document having a plurality of discrete objects, each discrete object having a format based on at least said layout and rendering parameters;

generating a document table based on an object-by-object basis for said document;

compressing said document according to said object-by-object basis;

encrypting said document according to said object-by-object basis;

~~serializing~~ <u>inputting</u> said document into a content stream according to said object-by-object basis;

~~serializing~~ <u>inputting</u> said document table into said content stream according to said object-by-object basis, wherein said document and said document table form said content stream according to said mobile device information; and

modifying an object of said content stream, wherein said object corresponds to distinguishable pieces of said request content, wherein said modifying comprises:

accessing an object pointer in said document table within said content stream, wherein said object pointer contains a vtable pointer for accessing instance methods and an attribute pointer for accessing said object within said content stream,

copying said object to a new memory space for modification,

altering said object with said instance methods, and

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updating said attribute pointer of said object pointer to the memory space of said object that has been altered.

29. (Currently Amended)    A  computer  system  of  structuring  interactive content for mobile devices, comprising:

a module to determine layout and rendering parameters based on mobile device information;

a module to parse requested content into a document having a plurality of discrete objects, each discrete object having a format based on at least said layout and rendering parameters;

a module to generate a document table based on an object-by-object basis for said document;

a module to compress said document according to said object-by-object basis;

a module to encrypt said document according to said object-by-object basis;

a module to ~~serialize~~ input said document into a content stream according to said object-by-object basis;

a  module  to  ~~serialize~~  input  said  document  table  into  said  content  stream according to said object-by-object basis, wherein said document and said document table form said content stream according to said mobile device information; and

a  module  to  modify  an  object  of  said  content  stream,  wherein  said  object corresponds  to  distinguishable  pieces  of  said  request  content,  wherein  means  for modifying comprises:

a module to access an object pointer in said document table within said content stream,  wherein  said  object  pointer  contains  a  vtable  pointer  for  accessing  instance methods and an attribute pointer for accessing said object within said content stream,

a module to copy said object to a new memory space for modification,

a module to alter said object with said instance methods, and

a  module  to  update  said  attribute  pointer  of  said  object  pointer  to  the  memory space of said object that has been altered.

30. (Currently Amended)    A <u>tangible</u> computer program product comprising a computer usable medium having computer readable program code means embodied in said medium for causing execute on a computer to structure interactive content for mobile devices, said computer readable program code means comprising:

a first computer readable program code means for causing a computer to determine layout and rendering parameters based on mobile device information;

a second computer readable program code means for causing a computer to parse requested content into a document having a plurality of discrete objects, each discrete object having a format based on at least said layout and rendering parameters;

a third computer readable program code means for causing a computer to generate a document table based on an object-by-object basis for said document;

a fourth computer readable program code means for causing a computer to compress said document according to said object-by-object basis;

a fifth computer readable program code means for causing a computer to encrypt said document according to said object-by-object basis;

a sixth computer readable program code means for causing a computer to ~~serialize~~ input said document into a content stream according to said object-by-object basis;

an seventh computer readable program code means for causing a computer to ~~serialize~~ input said document table into said content stream according to said object-by-object basis, wherein said document and said document table form said content stream according to said mobile device information; and

a eighth computer readable program code means for causing a computer to modify an object of said content stream, wherein said object corresponds to distinguishable pieces of said request content, wherein said ninth computer readable program code means comprises:

a ninth computer readable program code means for causing a computer to access an object pointer in said document table within said content stream, wherein said object pointer contains a vtable pointer for accessing instance methods and an attribute pointer for access said object within said content stream,

a tenth computer readable program code means for causing a computer to copy said object to a new memory space for modification,

a eleventh computer readable program code means for causing a computer to alter said object with said instance methods, and

a twelfth computer readable program code means for causing a computer to update said attribute pointer of said object pointer to the memory space of said object that has been altered.

31 - 33. (Canceled)